

Claims

What is claimed is

- Sub B¹
1. An apparatus for receiving video signals from a plurality of video cameras wherein the apparatus comprises:
 - a. a selector having a plurality of inputs wherein each input receives one of a plurality of video signals;
 - b. a video decoder coupled to an output of the selector wherein the video decoder receives a selected one of the plurality of video signals; and
 - c. a controller coupled to the video decoder wherein the controller conditions the video decoder according to a parameter representative of the selected one of the video signals.
 2. The apparatus according to claim 1 further comprising a memory device coupled to the controller for storing the parameter in association with an identification of a corresponding one of the video cameras.
 3. The apparatus according to claim 1 further comprising a memory device coupled to the controller for storing the parameter in a storage location which is associated with the corresponding camera.
 4. The apparatus according to claim 1 wherein the parameter is a selected one of a plurality of stored parameters, wherein each stored parameter corresponds to one of the plurality of video cameras.
 5. The apparatus according to claim 1 wherein the parameter is obtained from the

2 video decoder.

1 6. The apparatus according to claim 1 wherein the selector is a multiplexer.

1 7. The apparatus according to claim 1 wherein the parameter is a horizontal
2 frequency of the video signal.

1 8. The apparatus according to claim 1 wherein the video decoder comprises a
2 genlock block.

1 9. The apparatus according to claim 8 wherein the video decoder further
2 comprises an analog-to-digital converter for converting the selected one of the video signals
3 into a series of digital samples wherein the analog-to-digital converter performs sampling
4 according to pulses received from the genlock block.

10. An apparatus for receiving video signals from a plurality of video cameras
wherein the apparatus comprises:

- 3 a. a selector having a plurality of inputs wherein each input receives one
4 of a plurality of video signals;
- 5 b. a video decoder coupled to an output of the selector wherein the video
6 decoder receives a selected one of the plurality of video signals; and
- 7 c. a controller coupled to the video decoder wherein the controller
8 conditions the video decoder according to a plurality of parameters
9 representative of the selected one of the video signals.

1 11. The apparatus according to claim 10 further comprising a memory device
2 coupled to the controller for storing the plurality of parameters in association with an

3 identification of a corresponding one of the video cameras.

1 12. The apparatus according to claim 10 further comprising a memory device
2 coupled to the controller for storing the plurality of parameters in a storage location which is
3 associated with the corresponding camera.

1 13. The apparatus according to claim 10 wherein the plurality of parameters are a
2 selected set of a plurality of stored sets of parameters, wherein each stored set of parameters
3 corresponds to one of the plurality of video cameras.

1 14. The apparatus according to claim 10 wherein the parameter is obtained from
2 the video decoder.

1 15. The apparatus according to claim 10 wherein the selector is a multiplexer.

1 16. The apparatus according to claim 10 wherein the parameter is a horizontal
2 frequency of the video signal.

1 17. The apparatus according to claim 16 wherein the parameter is a horizontal
2 phase of the video signal.

1 18. The apparatus according to claim 10 wherein the parameter is a horizontal
2 phase of the video signal.

1 19. The apparatus according to claim 10 wherein the parameter is a chrominance
2 frequency of the video signal.

1 20. The apparatus according to claim 19 wherein the parameter is a chrominance
2 phase of the video signal.

1 21. The apparatus according to claim 10 wherein the parameter is a chrominance
2 phase of the video signal.

1 22. The apparatus according to claim 10 wherein the parameter is a gain level for
2 the video signal.

1 23. The apparatus according to claim 10 wherein the parameter is a dc clamping
2 level for the video signal.

1 24. The apparatus according to claim 10 wherein the video decoder comprises a
2 genlock block.

1 25. The apparatus according to claim 24 wherein the video decoder further
2 comprises an analog-to-digital converter for converting the selected one of the video signals
3 into a series of digital samples wherein the analog-to-digital converter performs sampling
4 according to pulses received from the genlock block.

1 26. A method of receiving video signals from a plurality of video cameras wherein
2 the method comprises steps of:

- 3 a. selecting one of the plurality of video cameras for providing a video
4 signal to a video decoder;
5 b. retrieving a parameter representative of the video signal from a memory
6 store; and
7 c. conditioning the video decoder according to the parameter.

1 27. The method according to claim 26 further comprising a step of capturing a
2 video frame from the selected one of the plurality of video cameras.

1 28. The method according to claim 27 further comprising a step of storing the
2 captured video frame.

1 29. The method according to claim 27 further comprising a step of completing a
2 cycle wherein the step of completing the cycle comprises performing the steps of selecting,
3 retrieving, conditioning and capturing for each camera of the plurality.

4 30. The method according to claim 26 further comprising a step of updating the
parameter according to the video signal thereby forming an updated parameter.

1 31. The method according to claim 30 wherein the step of updating the parameter
comprises a step of forming a predicted value for the parameter.

2 32. The method according to claim 31 wherein the step of forming a predicted
value for the parameter comprises steps of:

- 3 a. calculating a difference between prior value obtained for the parameter
4 and a current value obtained for the parameter; and
5 b. combining the difference with the current value.

1 33. The method according to claim 30 further comprising a step of storing the
2 updated parameter in association with an identification of the selected one of the plurality of
3 video cameras.

1 34. The method according to claim 33 further comprising a step of selecting a next

one of the plurality of cameras according to a sequence.

35. The method according to claim 30 further comprising a step of storing the updated parameter in a storage location which is associated with the corresponding camera.

36. The method according to claim 35 further comprising a step of selecting a next one of the plurality of cameras according to a sequence.

37. The method according to claim 26 further comprising a step of initializing the apparatus upon start-up by obtaining an initial value for the parameter corresponding to each video signal during a first cycle through all of the cameras wherein a video frame is captured from each camera during the first cycle.

38. The method according to claim 26 further comprising a step of initializing the apparatus upon start-up by performing two or more cycles through all of the cameras and wherein a video frame is captured from each camera only upon completion of the two or more cycles.

39. The method according to claim 26 wherein the parameter is a horizontal frequency of the video signal.

40. The method according to claim 39 wherein the parameter is a horizontal phase of the video signal.

41. The method according to claim 40 wherein the parameter is a chrominance frequency of the video signal.

44. The method according to claim 43 wherein the parameter is a dc clamping level for the video signal.

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